than originally thought and that patients undergoing such a procedure need to be made aware of this possible sequela. Although it is true that many patients with Klinefelter syndrome are already hypogonadal, the further decrease in serum testosterone in these patients may necessitate the use of exogenous androgen replacement. One disclaimer from a study such as this is that it is unknown whether this observation would also be seen in non-Klinefelter patients, in whom the testicular mass would be much greater than that found in Klinefelter patients. In addition, although serum testosterone is a surrogate marker for intratesticular testosterone levels, it is still unknown whether a drop of between 25% and 40% on serum testosterone translates into a similar drop in intratesticular levels. ■

References
1. Tash J, Schlegel PN. Histologic effects of testicular sperm extraction on the testicle in men with nonobstructive azoospermia. *Urology.* 2001;57:334-337.
2. Schlegel PN. Testicular sperm extraction: microdissection improves sperm yield with minimal tissue excision. *Hum Reprod.* 1999;14:131-135.

Prostatitis

Antibiotics and α-Blockers for Chronic Prostatitis: Evidence From Recent Randomized Placebo-Controlled Studies

Reviewed by J. Curtis Nickel, MD, FRCSC
Department of Urology, Queen's University, Kingston, Ontario, Canada
[*Rev Urol.* 2005;7(1):65-66]

Antibiotics and α-blockers are the 2 most common treatments employed by urologists for patients presenting with chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS), regardless of culture results and/or evidence of obstructive voiding. These medications are used because antibiotics are the primary therapy for the much rarer chronic bacterial prostatitis (associated with recurrent urinary tract infections and/or bacteriuria) and α-blockers are the primary therapy for the lower urinary tract symptoms associated with benign prostatic hyperplasia (which may be very similar to those experienced by men with CP/CPPS). Anecdotal experience and small studies in the older urologic literature propagated this medical strategy for CP/CPPS.

Ciprofloxacin or Tamsulosin in Men with Chronic Prostatitis/Chronic Pelvic Pain Syndrome: A Randomized, Double-Blind Trial

Alexander RB, Propert KJ, Schaeffer AJ, et al.
Ann Intern Med. 2004;141:581-589.

Alexander and colleagues, from the National Institutes of Health (NIH) Chronic Prostatitis Collaborative Research Network, recently published a 6-week study that randomized 196 men with refractory, long-standing CP/CPPS to double-blind therapy with ciprofloxacin, tamsulosin, both drugs, or placebo in a 2 × 2 factorial design. The study employed validated outcome parameters including the NIH-Chronic Prostatitis Symptom Index (CPSI) and standardized patient global assessments. The NIH-CPSI total score decreased modestly in all the treatment groups, including placebo, but no statistically significant difference in the primary outcome was seen for ciprofloxacin versus no ciprofloxacin or tamsulosin versus no tamsulosin. The authors conclude that ciprofloxacin and tamsulosin do not substantially reduce symptoms in men with long-standing CP/CPPS who had at least moderate symptoms.

This is an important paper, particularly for the treatment of men with CP/CPPS of long duration who have undergone multiple previous therapies. However, can the results of this study be extrapolated to men with CP/CPPS who are recently diagnosed (or symptomatic) or who are treatment naïve to antibiotics and/or α-blockers? Other recently published randomized, placebo-controlled trials may help shed some light on this dilemma.

Levofloxacin for Chronic Prostatitis/Chronic Pelvic Pain Syndrome in Men: A Randomized, Placebo-Controlled Multi-Center Trial

Nickel JC, Downy J, Clark J, et al.
Urology. 2003;62:614-617.

A randomized, placebo-controlled study comparing levofloxacin with placebo for 6 weeks in heavily pretreated men again showed no statistically or clinically significant difference between levofloxacin and placebo. There have been no treatment trials published comparing any antibiotic therapy with placebo in newly diagnosed, antibiotic-naïve men.

It has been suggested that these important studies did not unequivocally show that antibiotics are not useful in all patients with chronic prostatitis, and further studies

may indeed show that antibiotics have a role for patients who are recently symptomatic (and diagnosed early), who have definite prostatic inflammation (leukocytes in expressed prostatic secretion and/or postprostatic urine), or who have not been treated with antibiotics, alone or as one component of multimodal therapy.

It seems that although the study by Alexander and colleagues shows that α-blockers are ineffective in men with long-standing CPPS who have been previously treated with multiple therapies (including α-blockers), α-blockers may be effective in more recently diagnosed α-blocker-naïve men with treatment lasting longer than 6 weeks.

Terazosin Therapy for Chronic Prostatitis/Chronic Pelvic Pain Syndrome: A Randomized, Placebo Controlled Trial

Cheah PY, Liong ML, Yuen KH, et al.
J Urol. 2003;169:592-596.

Alfuzosin Treatment for Chronic Prostatitis/Chronic Pelvic Pain Syndrome: A Prospective, Randomized, Double-Blind, Placebo-Controlled, Pilot Study

Mehik A, Alas P, Nickel JC, et al.
Urology. 2003;62:425-429.

Treatment of Chronic Prostatitis/Chronic Pelvic Pain Syndrome with Tamsulosin: A Randomized Double-Blind Trial

Nickel JC, Narayan P, McKay J, Doyle C.
J Urol. 2004;171:1594-1597.

The data on α-blockers are much more substantial. Three randomized, placebo-controlled trials, primarily in more recently diagnosed, treatment-naïve patients, assessed the efficacy of terazosin (Cheah and colleagues), alfuzosin (Mehik and associates), and tamsulosin (Nickel and coworkers) compared with placebo. These trials showed modest efficacy at 6 weeks (Nickel group), significantly more efficacy at 14 weeks (Cheah group), and very clinically significant amelioration of symptoms at 24 weeks (Mehik group). It seems that although the study by Alexander and colleagues shows that α-blockers are ineffective in men with long-standing CPPS who have been previously treated with multiple therapies (including α-blockers), α-blockers may be effective in more recently diagnosed α-blocker-naïve men with treatment lasting longer than 6 weeks.

These important clinical trials in CP/CPPS now provide the data for evidence-based treatment strategies. Certainly, the important paper by the Alexander group has demonstrated that antibiotics and α-blockers are ineffective therapies (alone or in combination) in heavily treated men with a long-standing diagnosis of CP/CPPS. For those men, we must consider other modalities of therapy. ■